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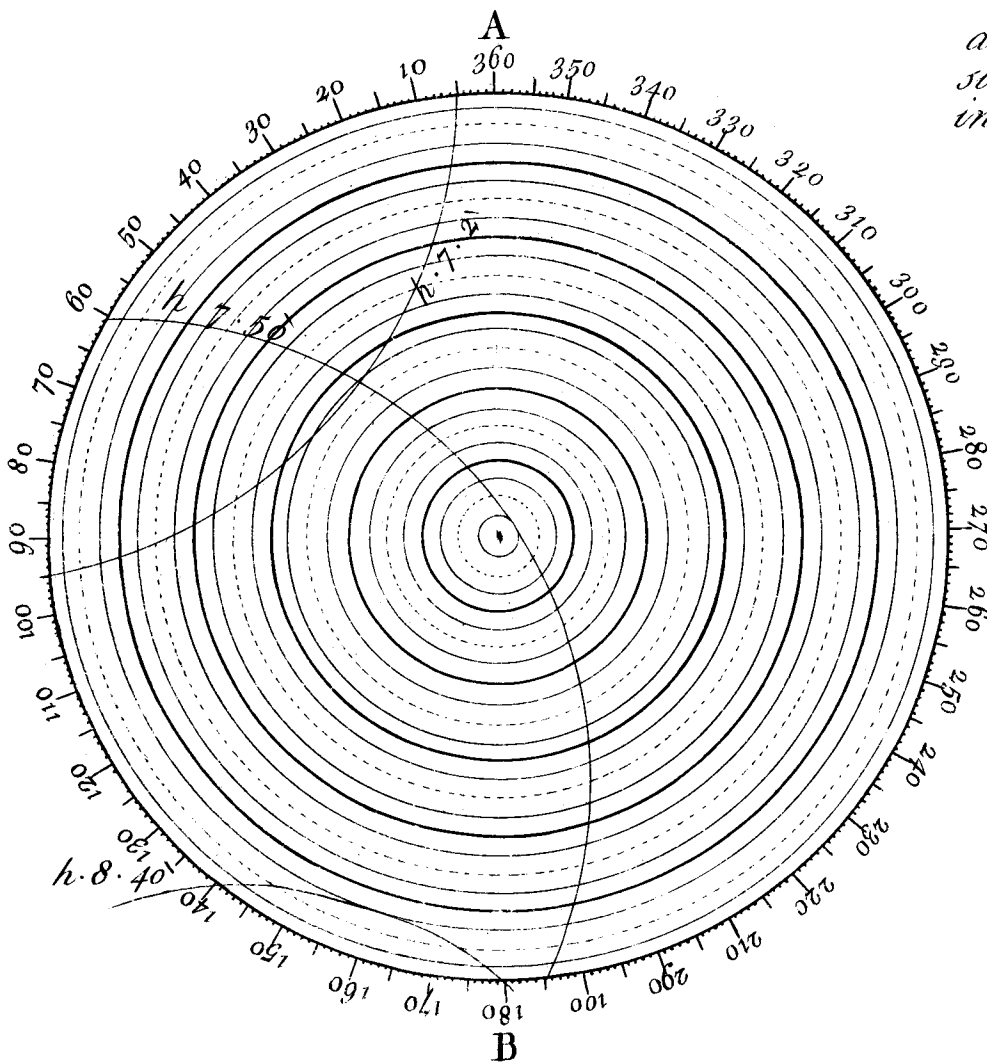
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*AB planum Circuli Verticalis  
per centrum Solis ducti*

*Maculae in figuris  
suis locis  
hic repraesentantur  
ad exprimendam  
singularem  
in serie obser-*



*Discus Solis in digitos XII et quadrantes digitorum divisus  
in quo gradus peripheriae 360 ab apice A  
sinistrorsum procedendo notantur, ut per singulas phases  
intersectio communis cum disco Lunae indicari possit*

observata Romæ die 15 Septembr. 1727. N. S.

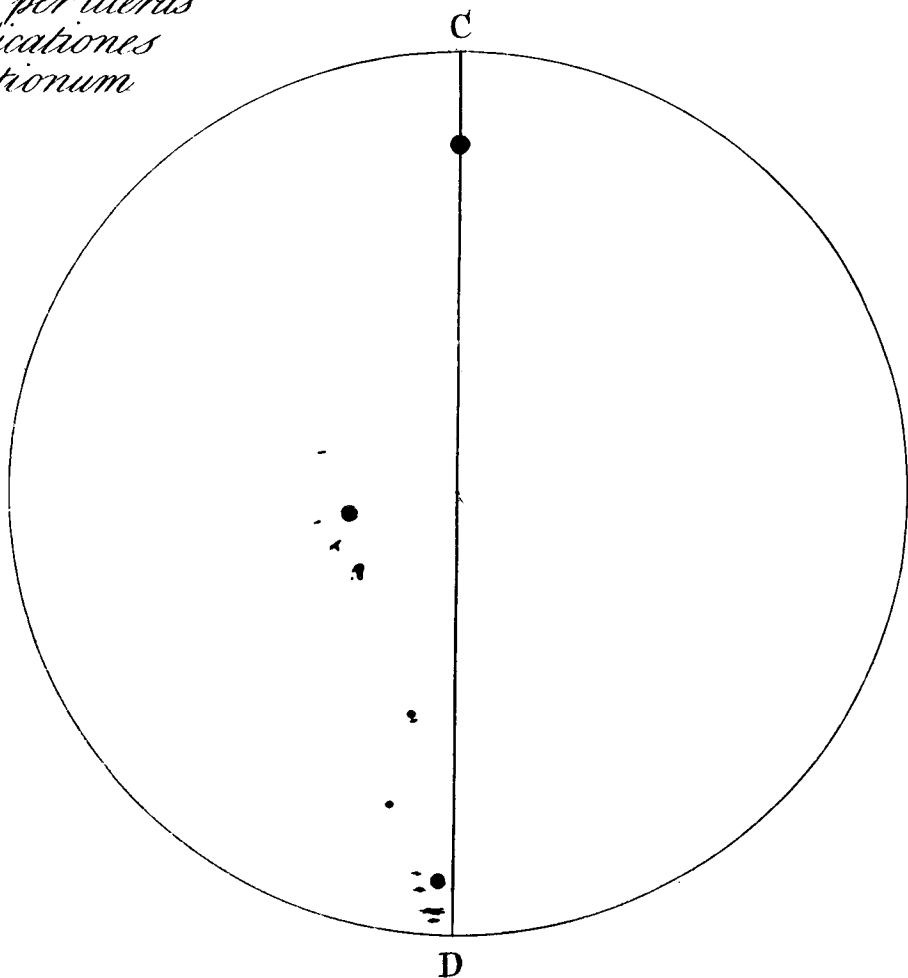
Plate 3

culie in figura Solaris Disci CD  
suis locis collocatae

CD planum circuli Verticalis  
per centrum Solis ducti

hic repetuntur  
l'exprimendum per literas  
regularum indicationes  
serie observationum

a



Maculae in disco Solis  
per Telescopium in chartam excepto  
ita erant constitutae

N<sup>o</sup> 122 is a Piece of another Grinder, perhaps of an Elephant. It hath very apparent Marks of being fossile, as well as the preceding, and is farther remarkable, for that a petrifying Substance being got between the Lamellæ hath very considerably separated and divided them from each other, in such a Manner, that they appear to have been set very loose.

N<sup>o</sup> 427, of my Collection of Quadrupeds and their Parts, is Part of an Elephant's Skull which was found at *Gloucester* after the Year 1630, together with some large Teeth, some five, others seven Inches in Compass, according to a short Inscription wrote upon this very Piece.

N. B. Tab. 11, Fig. 7. is one of the Tusks of the young Elephant that died at *London*, of which Mention hath been made above.

II. *Observationes Astronomicæ à R. P. Joh. Baptista Carbone transmissæ, communicante H. de Seguera Samuda, M. D. R. S. S. & Coll. Med. Lond. Lic.*

*Observatio Solaris Eclipsis propè Ulyssiponem habita die 15 Septembris Manè 1727. N. S. à P. Joanne Baptista Carbone S. J.*

**I**N *Prædio*, quod est occidentalius nostro Collegio D. Antonii M. 4'' hor. circiter, & cujus Latitudo Quadrante astronomico trium pedum explorata, est 38° 42' 58'', observavi hanc Eclipsim Telescopio pedum circiter 8, quod micrometro instruxeram vite comparato. Initium infra horizontem celebratum est; jamque digitos circiter 4 deficiebat Sol, quando ex opposito monte primò emerfit. Sequentes tamen phasēs  
observari

observari tantum potuere, reliquis fortuito eventu impeditis.

<i>Digiti</i>		<i>H.</i>	<i>'</i>	<i>"</i>
	<i>Immersf.</i>		<i>Temp.</i>	<i>Ver. corr.</i>
VI $\frac{1}{2}$	— — — —	5	55	8. <i>dub.</i>
VIII.	— — — —	6	10	54. <i>dub.</i>
VIII, m. i', fec. 48" max. obfc.		6	13	29. <i>circ.</i>
	<i>Emersf.</i>			
VI $\frac{1}{2}$	— — — —	6	31	49.
VI	— — — —	6	35	23.
V $\frac{1}{2}$	— — — —	6	38	45
V	— — — —	6	41	57
IV $\frac{1}{2}$	— — — —	6	45	2
IV	— — — —	6	47	59
III $\frac{1}{2}$	— — — —	6	50	49
III	— — — —	6	53	34
II $\frac{1}{2}$	— — — —	6	56	16
II	— — — —	6	58	54
I $\frac{1}{2}$	— — — —	7	1	28
I	— — — —	7	3	59
	— — — —	7	6	28
Finis Eclipsis	— — — —	7	9	2. <i>certifi.</i>

Post finem Eclipses, statim horologium pendulo instructum, quo ad temporis dimensionem usus sum, duplici Solis altitudine eodem quadrante astronomico successivè observatâ, ad trutinam revocavi; inventamque correctionem, in phasibus superius adnotatis adhibui.

Octobris die 15, Imersionem intimi Jovis Satellitis observavi, telescop. ped. 22. Contigit autem H. 9 10' 54".

Novem-

Novembris 7, ejusdem Satellitis Immerf. eodem telescopio, *H.* 9. 25' 45".

*Observationes Romæ habitæ in Eclipsi Solis, Manè conspecta eodem die ad Radices Collis Quirinalis.*

*Horæ. Minuta. Secunda Temporis veri post mediam noctem ex transitu Solis rectificatur.*

*H.* ' ''

7. 0. 0.

**I**ntendebam ad conspectum Sirij versantis in vicinia meridiani; cum ex Ephemeridum calculis post aliquot minuta Eclipsios initium promitteretur. Interea tamen directo in Solem tubo optico, exceptaque in charta imagine, jam cæpisse video Eclipsim ex aliquot minutis horariis. Videram die præcedenti maculas plures apparere in disco Solis: Quas cum in figura suis locis reddere cuperem ante initium Eclipsios, ne differem post earundem confectionem a disco Lunæ commensum illarum, ac situm respectu azimuthi adnotare; huic descriptioni statim incumbendum duxi, adeoque phases Eclipsios priores attendere prætermisi. Completa celeriter macularum delineatione sequentes phases accurate adnotavi cum V. C. Jo. Dominico Maraldi, uno verò ex meis domesticis numerante horaria secunda temporis clarâ voce in horologio pendulo instructo, & pluribus diebus ante ad meridiem exacto, ad phases singulas. (*Vid. Tab. 3.*)

7. 2. 17.

Latent Solaris disci digiti tres cum quadrante à Luna contacti. Intersectio discorum

S s s

Solis,

Solis, & Lunæ incidit in gr. 5. & 95. numeratis à puncto, quod est in figura inversa verticale, nempe *A*. Macula *a* est in plano azimuthi per centrum Solis à Zenith ducti, & distat in semidiametro disci Solaris à centro versus peripheriam digitis  $4\frac{1}{4}$ , ut in figura. Etiam macula *e* in eodem ferè

*H.* 1 " Azimutho versatur.

7. 21. 47. Cum per aliquod temporis intervallum nubes interceptissent adspectum Solis, paulo ante restituta ferenitate, nunc spectantur à Luna contacti digiti Solaris disci  $4\frac{1}{2}$ . Intersectio discorum Solis, & Lunæ fit in gr. disci Solaris 10. & 111. ut antea à puncto *A* imaginis per Lævam respicientis numeratis.
7. 24. 0. Vestigium dilutionis maculæ *m* prope *b* sitæ Lunæ discum subit.
7. 24. 40. Macula *b* incipit perstringi à disco Lunæ.
7. 25. 11. Eadem macula *b* tota immergitur.
7. 27. 41. Initium maculæ *c* incipit subire discum Lunæ.
7. 28. 31. Eadem macula *c* tota jam occultatur.
7. 29. 10. Digiti Solaris diametri  $5\frac{1}{2}$  latent.
7. 31. 9. Latent digiti  $5\frac{1}{4}$ . Intersectio discorum utriusque Luminaris fit in gr. 20, & 136.
7. 38. 45. Latent digiti 6, & gr. 31. atque 150 Solaris disci sunt puncta intersectionum cum Lunari.
7. 40. 58. Macula *d* Limbus prior à Lunæ circulo perstringitur.
7. 41. 45. Tota macula *d* jam latet.
7. 43. 15. Conteguntur Solis digiti  $6\frac{1}{4}$ ; & intersectio discorum incidit in-gr. 39. & 162.

H. ' "

7. 45. 26. Maculæ ferme Evanidæ *f* Limbus perstrin-  
gitur ab incurfu Lunæ.
7. 46. 20. Tota macula *f* à Luna contegitur.
7. 50. 0. Latent digiti  $6\frac{1}{4}$ , & luminarium periphe-  
ria se interfecant in gr. 61. & 185.
8. 0. 12. Latent paulo minus quàm digiti sex, feu  
 $5\frac{7}{8}$ , interfecant sese disci in gr. 62. &  
182.
8. 2. 25. Latent digiti  $5\frac{1}{4}$  ex gr. 63. ad 183.
8. 5. 24. Latent digiti  $5\frac{1}{4}$ . Intersectio Luminarium  
disci in gr. Solaris 80. & 192.
8. 8. 32. Latent digiti 5. Intersectio in gr.  $82\frac{1}{2}$ , &  
192  $\frac{1}{2}$ .
8. 11. 50. Incipit emergere Limbus prior maculæ *b*.
8. 12. 38. Tota macula *b* extra Limbum Lunæ; &  
macula *n* eidem proxima simul exit.
8. 14. 46. Emergit etiam macula *m* vicina maculæ *b*.
8. 16. 34. Emergit quoque macula *l* eidem *b*  
proxima.
8. 18. 29. Macula *c* emergit.
8. 22. 38. Latent digiti  $3\frac{1}{2}$ . Intersectio discorum in  
gr. 105. & 195.
8. 23. 40. Incipit emergere macula *d*.
8. 24. 10. Tota macula *d* extra discum Lunæ.
8. 27. 23. Latent digiti  $2\frac{1}{2}$ . Intersectio discorum fit  
in gr. Solaris 115. & 182.
8. 34. 5. Incipit emergere è disco Lunæ prior lim-  
bus maculæ *e*.
8. 34. 55. Tota macula *e* extra limbum Lunæ.
8. 35. 46. Latent digiti  $1\frac{1}{2}$ .
8. 37. 9. Latent digiti  $1\frac{1}{4}$ .
8. 37. 27. Exeunt extra Limbum Lunæ maculæ *g*, &  
*h*, sitæ prope maculam *e*.



H. ' "

8. 39. 46. Latent digiti  $0\frac{1}{4}$ . Intersectio Limborum utriusque disci Luminarium in Solari incidit in gr. 140. & 180.

8. 42. 8. Limbus superior Solis distat à Vertice gr. 58. 1'. inspectus per quadrantem aurichalchicum tubo instructum, ejus radius est palm. Rom. 3.

8. 44. 10. Finis Eclipseos, nunc primum excedente omnimodè ex Limbo Solis Lunæ disci extremo.

8. 46. 53. Limbus superior Solis per quadrantem aurichalchicum inspectus distat à vertice gr. 57. 30'. adeoque centrum Solis distat à vertice gr. 57. 46'.

8. 48. 1. Limbus superior Solis iterum inspectus distat à vertice gr. 57. 20. adeoque centrum Solis distat à vertice gr. 57. 36'.

Limbus inferior Solis distat à vertice per supradictum quadrantem gr. 57. 20'. adeoque centrum Solis distat à vertice gr. 57. 4'.

Eadem die in meridie cœlo clarissimo

11. 58. 25. Primus Solis limbus cum penumbra attingit lineam meridianam.

0. 1. 35. Secundus Solis Limbus cum penumbra attingit Lineam meridianam.

H. ' "

Ergo Meridies — 0. 0. 0.

In meridie distantia à vertice per quadrantem explorata fuit

Gr. 38. 27'. Limbi superioris. } Centri Solis  
Gr. 38. 59'. Limbi inferioris. } gr. 38. 43'.

*Observatio*

*Observatio Solaris deliquii die 14 Septembris 1727.*  
*N. S. habita in Observatorio Bononienfi à Cl.*  
*Eustachio Manfredi.*

**P**Lurimæ in Sole maculæ hujusce Eclipsis tempore videbantur: Cùm tamen præ nubibus necessariæ circa illas institui observationes non potuerint, ut earum situs in Solari disco deprehenderetur, præcipuarum tantùm aspectus in apposita figura exhibetur, qualis inferri potuit ex observationibus vespere diei 14. circa hor. 5. 26'. habitis; idque satis esse arbitror ad eas indicandas quæ sunt à Luna occultatæ Eclipsis tempore. Notandum tamen, prædictas maculas, ex quo observatæ sunt vespere diei 14. usque ad Eclipsis tempus, non modo singulas in suo parallelo Solari processisse, quantum regularis motus Solis fert, verùm etiam plerasque earum sine lege immutatas apparuisse tum figurâ, tum magnitudine; nonnullas etiam in plures divisas, aliasque in unum compactas; alias demum in Limbo Solis orientalis visas, quæ vespere præcedenti non apparebant.

Initium Eclipsis observari non potuit; sed hor. 18. 55'. 48''. Astronomic. sensibilis apparebat defectus, ut inter nubes.

*H. 1 11*

18. 59. 37. Unus digitus, & amplius fortasse latebat.

19. 3. 12. Digitus cum dimidio.

19. 6. 50. Duo digiti.

19. 10. 11. Duo cum dimidio. *dub.* Paulò post nubes Solem obtegunt.

19. 30. 35. Sol inter nubes videtur deficere plus digitis 4 cum dimidio.

Eclipsis

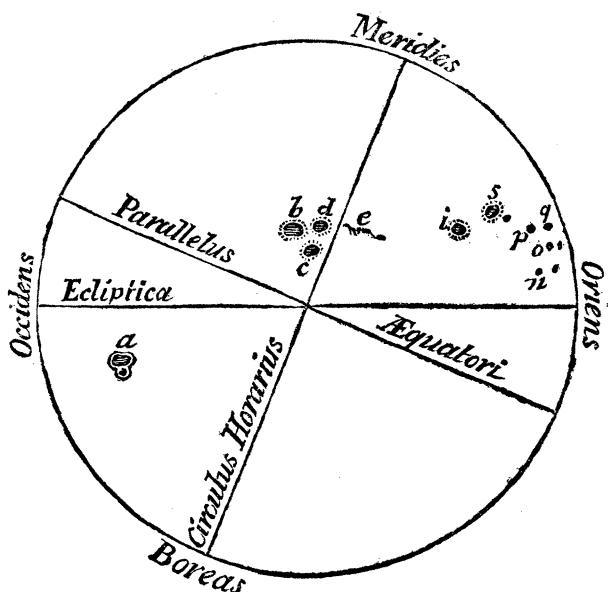
H. ' "

19. 35. 46. Eclipsis nondum pertingere videtur ad 5 digit.
19. 40. 47. Quinque digiti circiter.
19. 44. 31. Maculæ, *b, c, d, e*, jam latebant. Nunc occultatur centrum, *i*.
19. 47. 27. Limbus & inter maculas, *s*.
19. 47. 46. Secunda ex duabus maculis, *s*, omnino tegitur.
19. 51. 37. Eclipsis est paulò minor 5 digit. inter nubes.
19. 54. 12. Centrum maculæ, *p*, occultatur.
19. 55. 37. Centrum, *q*, item occultatur.
19. 59. 2. Quatuor dig. cum dimidio eclipsantur. *dub.*
20. 1. 22. Una ex maculis prope limbum (fortasse *n*) occultatur.
20. 10. 10. Eclipsis paulò min. dig. 3  $\frac{1}{2}$ .
20. 11. 47. Tota macula *i*, emerfit.
20. 15. 0. Eclipsis 3 digitorum.
20. 18. 48. Duorum cum dimidio.
20. 18. 49. Incipit emergere macula, *s*.
20. 22. 26. Duo digiti circiter eclipsantur.
20. 26. 14. Digitus 1  $\frac{1}{2}$ .
20. 36. 6. Finis Eclipseos a tribus observatoribus notatus, in eodem secundo temporis concordibus.

14. Sep.

14. Septembris, 1727, hora 5. min. 26.

*Figura macularum Solarium in verso situ.*



*Observatio defectus Solis habita Patavii XVIII.  
Kal. Octobris 1727. N. S. a Comite Joanne Poleno.*

**D**Enfioribus tamen nubibus sæpius intercurrentibus, non plures observari potuerunt Phases, quam eæ, quas subjeci.

*Temp. Ver.*

*Digit. '*

*H. ' ''*

19. 3. 45.

24. 12.

41. 27.

20. 30. 45.

38. 42.

—	—	—	0	10
—	—	—	3	0
—	—	—	4	30
—	—	—	1	30
—	—	—	Finis.	
III. A				